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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,139	01/31/2001	Hernan G. Otero	21710-68377	5404

28062 7590 12/01/2005

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EXAMINER	
BORLINGHAUS, JASON M	
ART UNIT	**PAPER NUMBER**
3628	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/773,139	OTERO ET AL.	
	Examiner	Art Unit	
	Jason M. Borlinghaus	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8,9,19-23 and 28-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,9,19-23 and 28-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

In view of the Appeal Brief filed on 9/9/05, PROSECUTION IS HEREBY REOPENED. New grounds for rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 8– 9, 19, 20 – 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane (US Patent 6,317,728) in view of Kent (Kent, Allen & Williams, James G. *Encyclopedia of Microcomputers. vol. 9. Marcel Deker Inc.* NYC, NY. 1992. pp. 91 – 92) and Sheimo (Sheimo, Michael D. *Stock Market Rules. 2nd Edition. McGraw-Hill.* 1999. pp. 148 – 150).

Regarding Claim 8 and 23, Kane discloses an apparatus/article for computerized trading comprising:

- a first algorithm plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12);
- a second plug-in (agent) for implementing a trading strategy ("rules and logic which evaluate market and specific equity behaviors") (see col. 7, lines 9-12);
- an engine (executing device - figure 1, 11) for providing service to said first and second plug-ins, whereby said first and second plug-ins are

implemented in said engine in order to execute a trade (see col. 5, lines 45-55);

- a third algorithm plug-in (see col. 7, lines 9-12);
- a fourth market plug-in (see col. 7, lines 9-12); and
- whereby either of said third or fourth plug-ins (agents) may be substituted ("update of trading rules and settings") for either said first plug-in or second plug-in respectively, in said engine, in order to execute a trade (see col. 5, lines 45-55).

Kane does not teach an apparatus for computerized trading comprising:

- wherein said second market plug-in implements a first limit on trading volume applicable in a first market and said fourth market plug-in implements a second limit on trading volume applicable in a second market, the second limit on trading volume being different from the first limit on trading volume.

Operating in multiple markets is old and well-known in the art of investment management and financial management, as evidenced Kent which states "The new trading activities of arbitrageurs, trading on slight differences in prices between markets...add to the volume of transactions in the security markets." (see p. 91). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by incorporating the ability to operate in multiple markets, as disclosed by Kent, to take advantage of arbitrage opportunities and in recognition that financial instruments trade on multiple exchanges.

Implementing a limit on trading volume is old and well-known in the art of investment management and financial management, as evidenced by Sheimo which states that an Immediate or Cancel (IOC) Order "...specifies a maximum quantity, but it can be less. It says to buy (sell) 2,000 shares right now if you can. If you cannot, buy (sell) 1,500 or 1,000 shares and cancel the remainder of the order." (see p. 149). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane and Kent by incorporating the ability to implement limits on trading volume, as disclosed by Sheimo, to take advantage of an old and well-known order modifier utilized in existing financial markets.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane, Kent and Sheimo to allow for any limitations on trading volume that the inventor desired, such as implementing the same trading limits in multiple markets or implementing different trading limits in multiple markets.

Regarding Claim 9, Kane discloses an apparatus wherein said first and third algorithm plug-ins (agents) implement trading strategies selected from a group consisting of: Short Sell (see col. 19, lines 43-45).

Regarding Claim 19, further method claim would have been obvious from apparatus/article claims rejected above, Claims 1 and 23, and is therefore rejected using the same art and rationale as outlined above.

Regarding Claim 20 and 21, further method claim would have been obvious from apparatus/article claim rejected above, Claim 9, and are therefore rejected using the same art and rationale.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane, Kent and Sheimo, as in Claim 19, and in further view of Barber (US Patent 6,173,292).

Regarding Claim 22, Kane discloses a computerized trading method as relied upon in Claim 19 above.

Neither Kane, Kent nor Sheimo teach that the method further comprises:

- a step on initiating a recovery mechanism in the event of system failure.

Barber discloses a computerized system that does initiate a recovery mechanism in the event of system failure (see col. 4, lines 65+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane, Kent and Sheimo by incorporating a recovery mechanism in the event of system failure, as disclosed by Barber, to protect against data loss.

Claims 28 and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Kane, Kent and The Handbook (Merz, K.J. & Rosen, J. *The Handbook of Investment Technology. Mc-Graw Hill.* 1997, pp. 168 – 169).

Regarding Claim 28, Kane discloses a method for computerized trading, comprising:

- providing a plurality of algorithm plug-ins, each of the algorithm plug-ins for implementing a respective trading strategy from a plurality of trading strategies, all of the trading strategies being different from each other. ("The securities trading system according to the invention may further include a plurality of agents, each agent operating in response to a dedicated one of the buy/sell rules, and wherein each of the agents has a respective input for commonly receiving the buy/sell data." – see col. 3, lines 10 –14). ("...all agents represent different buy and sell rules..." – see col. 5, lines 10 - 11);
- providing a plurality of market plug-ins (agents) for implementing rules ("rules and logic which evaluate market and specific equity behaviors" - see col. 7, lines 9-12) in a plurality of markets, all of the markets being different from each other ("...communicating with at least one securities exchange..." – see col. 3, line 23 – establishing that the Kane's trading system can operate in several markets);
- configuring an engine with the selected one of the algorithm plug-ins and with the selected one of the market plug-ins, the engine being for providing to the selected one of the algorithm plug-ins access to market data ("...a data acquisition system having an input communicating with at least one securities exchange for receiving buy/sell data..." – see col. 3, lines 23 – 24) and for sending orders on behalf of the selected one of the algorithm plug-ins ("...the agents having outputs communicating with the

securities exchange for executing the buy/sell orders..." – see col. 3, lines 33 – 35) and for receiving notification of executions of orders on behalf of the selected one of the algorithm plug-ins. ("The system supports alphanumeric paging to pagers and PCS phones, enabling the remote notification of executed trades, account balances, etc." – see col. 12, lines 2 – 4 – establishing that Kane's trading system receives notification of executed trades); and

- using the configured engine to carry out trades in accordance with the trading strategy implemented by the selected one of the algorithm plug-ins and in accordance with market rules implemented by the selected one of the market plug-ins. ("Generally, all agents make a recommendation as to the disposition of a respective security and/or commodity and a vote is taken of all decisions of the respective agents by a voting algorithm contained e.g. in the decision logic. The result of the vote is transmitted via one of the "buy long" data channel or the "sell short" data channel, and the decision is executed in the executing device ..." – see col. 5, lines 45 – 55).

Kane does not teach a method for computerized trading, comprising:

- providing market plug-ins, each market plug-ins for implementing rules for a respective market;
- selecting one of the algorithm plug-ins; and
- selecting one of the market plug-ins.

The Handbook discloses:

- providing a market plug-in (compliance module), each market plug-in (module) for implementing rules for a respective market. (see p. 168 – 169).

Operating in multiple markets is old and well-known in the art of investment management and financial management, as evidenced Kent which states "The new trading activities of arbitrageurs, trading on slight differences in prices between markets...add to the volume of transactions in the security markets." (see p. 91). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by incorporating the ability to operate in multiple markets, as disclosed by Kent, to take advantage of arbitrage opportunities and in recognition that financial instruments trade on multiple exchanges.

Modular programming and the selection/implementation of modules for use is old and well known in the art of computer programming and computer system design. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane and Kent by incorporating the ability to select plug-ins (modules) as required for implementation of the system to provide the system functionality.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane and Kent by incorporating a compliance module, as disclosed by The Handbook, to ensure that trades conducted on the system complied with rules for the respective market in which trades were conducted.

Regarding Claim 35, further apparatus claim would have been obvious from method rejected above, Claim 29, and is therefore rejected using the same art and rationale.

Claims 29 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane, Kent and The Handbook, as in Claim 28 above, and in further view of Sheimo.

Regarding Claims 29, Kane discloses a method wherein:

- a market plug-in (see col. 7, lines 9-12)

Kane does not teach a method wherein:

- a first one of said market plug-ins implements a first limit on trading volume and a second one of said market plug-ins implements a second limit on trading volume, the second limit being different from the first limit.

Operating in multiple markets is old and well-known in the art of investment management and financial management, as evidenced Kent which states "The new trading activities of arbitrageurs, trading on slight differences in prices between markets...add to the volume of transactions in the security markets." (see p. 91). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane by incorporating the ability to operate in multiple markets, as disclosed by Kent, to take advantage of arbitrage opportunities and in recognition that financial instruments trade on multiple exchanges.

Implementing a limit on trading volume is old and well-known in the art of investment management and financial management, as evidenced by Sheimo which states that an Immediate or Cancel (IOC) Order "...specifies a maximum quantity, but it can be less. It says to buy (sell) 2,000 shares right now if you can. If you cannot, buy (sell) 1,500 or 1,000 shares and cancel the remainder of the order." (see p. 149). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane and Kent by incorporating the ability to implement limits on trading volume, as disclosed by Sheimo, to take advantage of an old and well-known order modifier utilized in existing financial markets.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane, Kent and Sheimo to allow for any limitations on trading volume that the inventor desired, such as implementing the same trading limits in multiple markets or implementing different trading limits in multiple markets.

Regarding Claim 36, further apparatus claim would have been obvious from method claim rejected above, Claim 29, and is therefore rejected using the same art and rationale.

Claim 30 – 32 and 37 - 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane, Kent and The Handbook, as in Claim 28, and in further view of VNR (Brownstone, D.M. & Franck, I.M. *The VNR Investor's Dictionary. Van Nostrand*

Reinhold Company. New York. 1981. pp. 150 & 292) and The Times (Armstrong, P., *Exchanges Closer to Single Stock Market. The Times.* September 24, 1999. p.33).

Kane discloses a method for computerized trading wherein there are a plurality of trading strategies implemented respectively by said algorithm plug-ins ("...all agents represent different buy and sell rules..." – see col. 5, lines 10 - 11) and that the algorithm plug-ins include:

(d) a short selling strategy (see col. 19, lines 43-45).

Neither Kane, Kent nor The Handbook teach that the algorithm plug-ins comprise at least two/three/four of the group of trading strategies consisting of:

(a) a volume-weighted-average-price strategy;

(b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument;

(c) a hedging strategy;

(e) a stop loss strategy;

(f) an "iceberg" strategy in which a part that is less than all of an order is sent to market at any given time; and

(g) an auto trader strategy to determine whether a trade is to be sent to market or sold from an account.

VNR discloses trading strategies consisting of:

(c) a hedging strategy. ("In the securities or commodities markets, hedging is the simultaneous execution of present and future transactions in the hope of minimizing risk." – see page 150); and

(e) a stop loss strategy. ("A securities order carrying instructions to sell specified securities at the point where their market value declines to a stated price" – see page 292).

The Times discloses a trading strategy consisting of:

(f) an "iceberg" strategy in which a part that is less than all of an order is sent to market at any given time. ("...'iceberg orders', by which fund managers wanting to sell a big line of stock can drip-feed it into the market to prevent depressing the price.." – see page 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane, Kent and The Handbook by incorporating algorithms such as a short sell strategy, a hedging strategy, a stop loss strategy and an "iceberg strategy" as established by Kane, VNR and The Times to allow the algorithm plug-ins to implement common trading strategies.

Regarding Claims 37 - 39, further apparatus claims would have been obvious from method claims rejected above, Claims 30 – 32, and are therefore rejected using the same art and rationale.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane, Kent and The Handbook, as in Claim 28, and in further view of Freeny (US Patent 6,594,643).

Regarding Claim 33, Kane discloses a method of computerized trading further comprising:

- an algorithm plug-in. (see col. 7, lines 9-12)

Neither Kane, Kent nor The Handbook teach a method of computerized trading further comprising:

- parameterizing the selected one of the algorithm plug-ins to execute at least one trade.

Freeny discloses a method of computerized trading further comprising:

- parameterizing ("predetermined criterion entered into the individual trading computer by an individual via the input device" – see col. 2, lines 53 – 59) the selected one of the algorithm plug-ins to execute at least one trade. ("The predetermined trading criteria include instructions, such as buy and sell orders, or algorithms capable of being used to analyze investment data to generate a trade request to buy and/or sell one or multiples of an investment item or products." – see col. 3, lines 22 – 26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane, Kent and The Handbook by incorporating the ability for parameterizing the system's algorithm plug-ins and allowing the user to execute at least one trade based upon those algorithm plug-ins, as disclosed by Freeny,

to allow the user to execute any trade or employ any strategy, whether a strategy common to the industry or personally devised, while using the trading system.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kane, Kent and The Handbook, as in Claim 28, and in further view of Martyn (US Patent 6,195,647).

Regarding Claim 34, Kane discloses a method of computerized trading further comprising:

- algorithm plug-ins. (see col. 7, lines 9-12);

Neither Kane, Kent nor The Handbook teach a method of computerized trading wherein:

- the selecting of one of the algorithm plug-ins includes selecting a selection from a pull-down menu.

Martyn discloses a method of computerized trading wherein the selecting of one of the functions includes selecting a selection from a pull-down menu. ("Menu bar includes several pull-down menus..." – see col. 4, lines 48 – 49 and figure 3).
It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Kane, Kent and The Handbook by incorporating the ability for selecting the desired selection from a pull-down menu, as was done by Martyn, to make the trading system user friendly.

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Borlinghaus whose telephone number is (571) 272-6924. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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